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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,640	01/20/2004	Stephen R. Van Doren	200313588-1	9874

22879 7590 04/29/2010

HEWLETT-PACKARD COMPANY  
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EXAMINER
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CHERY, MARDOCHEE

ART UNIT	PAPER NUMBER
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2186

NOTIFICATION DATE	DELIVERY MODE
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04/29/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/760,640	<b>Applicant(s)</b> DOREN ET AL.	
	<b>Examiner</b> MARDOCHEE CHERY	<b>Art Unit</b> 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13 and 15-24 is/are rejected.
- 7) ☒ Claim(s) 10, 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/12/09, 8/12/09, 8/11/09, 8/11/09, 8/11/09</u> .             | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 8/11/09 has been entered.

2. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Response to Amendment***

3. No amendment has been filed. On May 27, 2008, Appellants filed an Appeal Brief. However, on August 11, 2009, Appellants filed a Request for Continued Examination (RCE) under 37 C.F.R. 1.114. The RCE is treated as a request to withdraw the appeal.

***Response to Arguments***

4. No arguments/remarks have been filed. Appellants' submission is in the form of Information Disclosure statements (IDSs) filed on August 11, 2009. Thus, the claims stand rejected and will be treated as in the Office action dated April 18, 2007.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6, 11-13, 15-21, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Glasco (2005/0251626).

As per claim 1, Glasco discloses a system comprising: a first node having an associated cache including data having an associated first cache state, the first cache state being capable of identifying the first node as being an ordering point for serializing requests from other nodes for the data [par. 45, ll 1-3; par. 87, ll 11-16; pars. 120-123].

As per claim 2, Glasco discloses the first cache state enables the first node to provide a data response to a request for the data from a second node for the data without updating a system memory, the data response comprising a copy of the data requested from the second node [pars. 131, 0116, 0118, 0120].

As per claim 3, Glasco discloses the first cache state enables the first node to provide an ownership data response to a request for the data from a second node, the ownership data response transferring the ordering point from the first node to the second node [pars. 89-90].

As per claim 4, Glasco discloses the first node provides the ownership data response without updating a system memory [par. 131].

As per claim 5, Glasco discloses the first node defines a first processor and the second node defines a second processor [Fig. 2], each of the first processor and the second processor having an associated cache [par. 3], ll 6-9], the associated caches of

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the first and second processors each comprising a plurality of cache lines [Abstract], each cache line having a respective tag address that identifies associated data and each cache line having state information that indicates a state of the associated data for the respective cache line [par. 59], the first and second processors being capable of communicating with each other and with other nodes of the system through an interconnect [Fig. 1B, Switch 131; par. 0051].

As per claim 6, Glasco discloses a first cache controller associated with the first processor and a second cache controller associated with the second processor [Fig. 2, Controller 230], the first cache controller being operative to manage data requests and responses for the associated cache of the first processor [Abstract], the first cache controller effecting state transitions associated with the data in the associated cache of the first processor based on the data requests and responses for the associated cache of the first processor [par. 10], the second cache controller being operative to manage data requests and responses for the associated cache of the second processor [par. 12], the second cache controller effecting state transitions associated with the data in the associated cache of the second processor based on the data requests and responses for the associated cache of the second processor [par. 15].

As per claim 11, the rationale in the rejection of claim 1 is herein incorporated.

As per claim 12, the rationale in the rejection of claim 2 is herein incorporated.

As per claim 13, the rationale in the rejection of claim 3 is herein incorporated.

As per claim 15, the rationale in the rejection of claim 1 is herein incorporated.

As per claim 16, the rationale in the rejection of claim 1 is herein incorporated.

As per claim 17, the rationale in the rejection of claim 2 is herein incorporated.

As per claim 18, the rationale in the rejection of claim 3 is herein incorporated.

As per claim 19, the rationale in the rejection of claims 1 and 3 is herein incorporated.

As per claim 20, the rationale in the rejection of claim 2 is herein incorporated.

As per claim 21, the rationale in the rejection of claim 3 is herein incorporated.

As per claim 24, the rationale in the rejection of claim 1 is herein incorporated.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7, 8, 9, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glasco (2005/0251626) in view of Arimilli (6,138,218).

As per claim 7, Glasco discloses the claimed invention as discussed above.

However, Glasco does not explicitly teach a third node retries the source broadcast request employing a forward progress protocol as required.

Arimilli discloses a third node retries the source broadcast request employing a forward progress protocol [col. 1, ll 6-12; col. 1, lines 13-14; col. 1, lines 33-41; col. 5, lines 19-54] in order to allow other traffic to proceed and alleviate the prospect of a livelock (col. 1, ll 13-14).

Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention by Applicant, to modify the system of Glasco to include a third node retrying the source broadcast request employing a forward progress protocol since this would have allowed other traffic to proceed and alleviated the prospect of a livelock (col. 1, ll 13-14) as taught by Arimilli.



As per claim 8, Arimilli discloses the forward progress protocol comprises a null-directory protocol [col. 1, ll 6-12; col. 1, lines 13-14; col. 1, lines 33-41; col. 5, lines 19-54;].

As per claim 9, Glasco discloses the source broadcast protocol comprises an incomplete protocol [par. 4, ll 9-11].

As per claims 22 and 23, the rationale in the rejection of claim 7 is herein incorporated.

#### ***Allowable Subject Matter***

9. Claims 10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. When responding to the office action, Applicant is advised to clearly point out the patentable novelty that he or she thinks the claims present in view of the state of the art disclosed by references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.111(c).

12. When responding to the Office action, Applicant is advised to clearly point out where support, with reference to page, line numbers, and figures, is found for any amendment made to the claims.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARDOCHEE CHERY whose telephone number is (571)272-4246. The examiner can normally be reached on 8:30A-5:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571)272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mardochee Chery/  
Primary Examiner, Art Unit 2188

April 25, 2010